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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,825	12/19/2001	Jorge Adrian Kittl	TI-23892	8239

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EXAMINER

KOBERT, RUSSELL MARC

ART UNIT PAPER NUMBER

2829

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/023,825	Applicant(s) KITTL ET AL.	
	Examiner Russell M Kobert	Art Unit 2829	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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1. Applicant's election of Species (a), claims 1-4, in Paper No. 07282003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 5-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 07282003.
3. The abstract of the disclosure is objected to because it fails to fall within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.
5. Claim 1-4 are objected to because of the following informalities: The sequence of steps as set forth in claim 1 is ambiguous. Moreover, the limitations in claim 1

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describing the product formed to be a transistor and expounding on the improved features of the claimed invention are not considered to further limit the claimed method of forming. In order to better understand the sequence of steps required to make Applicants' claimed invention, the claim has been restructured to best reflect such interpretation as follows:

A method of forming an integrated circuit transistor structure comprising the steps of:

Forming a masking layer over a patterned polysilicon layer over a gate dielectric over a silicon body;

Implanting an initial dose of first-conductivity-type dopants to form source/drain extension diffusions in said silicon body then removing said masking layer;

Implanting an additional dose of first-conductivity-type dopants with sidewall spacers present on said patterned polysilicon layer with a deeper stopping distance than said step of implanting an initial dose, to form main source/drain diffusions in said silicon body;

Depositing metal overall, and reacting said metal to form a conductive silicide compound in at least some locations.

Appropriate correction is required.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ma et al (4855247) or Huang (4963504; with particular emphasis to claim 1 in Huang) or Sanchez (5102815).

8. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Chao (4906589).

Chao anticipates a method of forming an integrated circuit transistor structure comprising the steps of:

Forming a masking layer (40, 50) over a patterned polysilicon layer (30) over a gate dielectric (20) over a silicon body (col 4, ln 59 – col 5, ln 5);

Implanting an initial dose of first-conductivity-type dopants to form source/drain extension diffusions in said silicon body then removing said masking layer (col 5, ln 6-34);

Implanting an additional dose of first-conductivity-type dopants with sidewall spacers (82) present on said patterned polysilicon layer with a deeper stopping distance than said step of implanting an initial dose, to form main source/drain diffusions in said silicon body (col 5, ln 57 – col 6, ln 5);

Depositing metal overall, and reacting said metal to form a conductive silicide compound in at least some locations (col 6, ln 45-65).

As to claim 2, the masking material is silicon nitride (40).

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As to claim 3, the sidewall spacers consist predominantly of silicon dioxide (col 5, ln 42-46).

As to claim 4, the patterned polysilicon layer (38) is separated from the semiconductor (10) by a gate oxide layer (20); see Figures 9 and 10.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chittipeddi et al (5045486), Yoo (5089432), Lee et al (5330925) and Sanchez (5583067) show methods of forming integrated circuit transistor structures by utilizing gate sidewall structures in combination with plural doping steps.

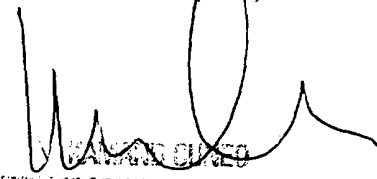
10. A shortened statutory period for response to this action is set to expire three month(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (703) 308-5222.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Russell M. Kobert  
Patent Examiner  
Group Art Unit 2829  
August 29, 2003



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